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EXAMINER	
BROOME, SAID A	

ART UNIT	PAPER NUMBER
2628	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/512,058	NOMURA ET AL.	
	Examiner	Art Unit	
	SAID BROOME	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 April 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *47-58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *47-50,52-56 and 58* is/are rejected.

7)☒ Claim(s) *51 and 57* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to an amendment filed on 4/7/2009.

2. Claims 1-46 have been cancelled.

3. Claims 47-58 have been added.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 47-50, 52-56 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swift (US Patent 6,765,568) in view of Harman (US Patent 6,496,598).

Regarding claim 47, Swift teaches an image data generation apparatus (col. 5 lines 21-23: "*…computer 102…used to display…stereo image…*"), comprising:

reception means for receiving a parameter for displaying three-dimensional image data (col. 3 lines 24-26 - 47-50: "*…a…file format…of the original left and right is known, as designated by the tag within the…file…*" and col. 7 lines 51-57: "*The…system takes a Stereoscopic Media File…saves a local copy in…the display method selected…*", *where the system accepts a file and therefore contains a reception means to retrieve a parameter, such as a file format*) relating to a plurality of viewpoints for enabling stereoscopic vision (col. 9 lines 53-62: "*…a series of 3D stereoscopic images of an object into one file…store a series of N images*

into a…file…the point of view of the camera is swung around the object to generate…the… images.", *where a file stores an object imaged from a plurality of stereoscopic vision camera view points*);

three-dimensional image display control information generation means for generating, based on the received parameter (col. 2 lines 28-41: "*The preferred embodiment…provides a single format with independent right and left channels…to represent the stereoscopic media…it provides a means of displaying stereoscopic media…it provides automatic and manual optimization adjustments such as parallax shift adjustment…to the stereoscopic media based on viewing hardware…for optimal viewing quality.*", *where a parameter, such as the file format, is provided that controls the format of image data to enable the image to be displayed in a parallax three-dimensional image format on a display*), three-dimensional image display control information necessary for conversion for enabling stereoscopic vision of said three-dimensional image data in a desired format adapted to a display unit when externally received image data includes said three-dimensional image data (col. 3 lines 24-26: "*…a single media file format that is converted to various display formats on the user side…*" and in col. 8 lines 45-63: "*Another embodiment allows for automatic detection of 3D display hardware…an appropriate display method can be automatically selected…Another embodiment automatically (or manually if desired) adjusts with overall left and right image shift…the 3D stereoscopic image is adjusted accordingly…*", *wherein based on the display device, the file format of the display control information is analyzed and is converted to the proper display control file format required to accurately display the three-dimensional data, thereby correctly reproducing the 3D media on the display*); and

file generation means for generating a multimedia information file capable of including both of externally received said three-dimensional image data and said three-dimensional image display control information, or externally received at least two-dimensional image data (col. 3 lines 24-26 and 47-50: "*…a single media file format that is converted to various display formats…the format of the original left and right is…designated by the tag within the…file…*", *Fig. 1*, and col. 8 lines 11-20: "*...a file structure is created to store and preserve various types of stereo media…This one file format can store multiple or single stereo/non-stereo media elements. FIG. 10 illustrates a VRR file 1000 that may contain…a…Stereoscopic Object Model…*", *where the stereoscopic media file contains information related to the three-dimensional image data, such as stereoscopic three-dimensional models*);

However, Swift fails to teach said three-dimensional image display control information including first information indicating border image data to be displayed around an image of said three-dimensional image data. Harman teaches said three-dimensional image display control information including first information indicating border image data to be displayed around an image of said three-dimensional image data (col. 6 lines 45-51: "*The processes would then work in either real-time or non real-time in order to create the 3D images. This can be further optimised through the use of borders…The 3D images may then be stored or transmitted to a 3D display, including shutterglasses, polarising glasses or an autostereoscopic display*." and col. 14 lines 4-20: "*The present invention therefore preferably also defines a common border or reference point within a viewed image…This has the advantage of enhancing the stereoscopic effect in many scenes. This reference point can be a simple video border or…i) A simple coloured video border around the perimeter of the image. ii) A complex coloured video border*

consisting of two or more concentric borders…"). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the stored three-dimensional data of Swift with the optimized three-dimensional border display parameters of Harman because this combination would provide an accurate display of stereoscopic image data that has been analyzed to determine the three-dimensional data to be displayed, in which stereoscopic enhancement would be enabled through modifications to the image data using borders around the stereo images based on the determined display information to ensure preservation of the stereoscopic effect.

Regarding claims 48 and 54, Swift fails to teach said three-dimensional image display control information further includes second information indicating whether a border is to be displayed around the image of said three-dimensional image data, using said border image data. Harman teaches said three-dimensional image display control information further includes second information indicating whether a border is to be displayed around the image of said three-dimensional image data, using said border image data (col. 6 lines 45-51: "*The processes would then work in either real-time or non real-time in order to create the 3D images. This can be further optimised through the use of borders...The 3D images may then be stored or transmitted to a 3D display, including shutterglasses, polarising glasses or an autostereoscopic display.*" and col. 14 lines 4-20: "*The present invention therefore preferably also defines a common border or reference point within a viewed image...This has the advantage of enhancing the stereoscopic effect in many scenes. This reference point can be a simple video border or...i) A simple coloured video border around the perimeter of the image. ii) A complex coloured video border consisting of two or more concentric borders…*", *in which a plurality of borders may be*

provided to enhance stereoscopic effect, therefore a subsequent, or second, border, image is applied to the three-dimensional data), therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the stored three-dimensional data of Swift with the optimized three-dimensional border display parameters of Harman because this combination would provide an accurate display of stereoscopic image data that has been analyzed to determine the three-dimensional data to be displayed, in which stereoscopic enhancement would be enabled through modifications to the image data using borders around the stereo images based on the determined display information to ensure preservation of the stereoscopic effect.

Regarding claims 49, 52, 55 and 58, Swift fails to teach said border image data is stereo image data. Harman teaches said border image data is stereo image data (col. 6 lines 45-51: "*The processes would then work in either real-time or non real-time in order to create the 3D images. This can be further optimised through the use of borders…The 3D images may then be stored or transmitted to a 3D display, including…an autostereoscopic display*." and col. 14 lines 4-20: "*The present invention therefore preferably also defines a common border or reference point within a viewed image…has the advantage of enhancing the stereoscopic effect…*") therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the stored three-dimensional data of Swift with the optimized three-dimensional border display parameters of Harman because this combination would provide an accurate display of stereoscopic image data that has been analyzed to determine the three-dimensional data to be displayed, in which stereoscopic enhancement would be enabled through modifications to the image data using borders around the stereo images based on the determined display information to ensure preservation of the stereoscopic effect.

Regarding claim 50, Swift teaches an image data reproduction apparatus (col. 5 lines 21-23: "*…computer 102…used to display…stereo image…*", *Fig. 2: element 102*) for reproducing a multimedia information file generated by an image data generation apparatus (col. 3 lines 24-26: "*…a single media file format that is converted to various display formats on the user side…*" and in col. 8 lines 45-63: "*Another embodiment allows for automatic detection of 3D display hardware…an appropriate display method can be automatically selected…Another embodiment automatically (or manually if desired) adjusts with overall left and right image shift…the 3D stereoscopic image is adjusted accordingly…*", *wherein based on the display device, the file format of the display control information is analyzed and is converted to the proper display control file format required to accurately display the three-dimensional data, thereby correctly reproducing the 3D media on the display*), said image data generation apparatus generating the multimedia information file capable of including both of externally received three-dimensional image data and three-dimensional image display control information, or externally received at least two-dimensional image data (col. 3 lines 24-26 and 47-50: "*…a single media file format that is converted to various display formats…the format of the original left and right is…designated by the tag within the…file…*", *Fig. 1*, and col. 8 lines 11-20: "*…a file structure is created to store and preserve various types of stereo media…This one file format can store multiple or single stereo/non-stereo media elements. FIG. 10 illustrates a VRR file 1000 that may contain…a…Stereoscopic Object Model…*", *where the stereoscopic media file contains information related to the three-dimensional image data, such as stereoscopic three-dimensional models*), comprising:

reception means for receiving the multimedia information file (col. 3 lines 24-26 - 47-50: "*…a…file format…of the original left and right is known, as designated by the tag within the…file…*" and col. 7 lines 51-57: "*The…system takes a Stereoscopic Media File…saves a local copy in…the display method selected…*");

file structure analysis means for analyzing a structure of said multimedia information file so as to extract the three-dimensional image display control information and the three-dimensional image data or said two-dimensional image data (col. 3 lines 23-50: "*…the invention…includes a…media file format…to…display formats on the user side…support of auto-detection 3D stereo hardware systems…automatic…calibration /adjustments for physical 3D viewing mechanisms…and stereoscopic viewing that…as designated by the tag within the Stereoscopic 3D Media file…*", *where the file format is analyzed to determine the associated display format*);

three-dimensional image display control information analysis means for analyzing said three-dimensional image display control information (col. 3 lines 24-50: "*…it provides a single format with independent right and left channels…to represent the stereoscopic media…it provides automatic and manual optimization adjustments such as parallax shift adjustment, brightness control, color adjustment, and cross-talk reduction to the stereoscopic media…*", *in which the file format is analyzed to determine the display control data*);

data reproduction means for reproducing said three-dimensional image data extracted by the file structure analysis (col. 8 lines 45-63: "*Another embodiment allows for automatic detection of 3D display hardware…an appropriate display method can be automatically selected…Another embodiment automatically (or manually if desired) adjusts with overall left*

and right image shift...the 3D stereoscopic image is adjusted accordingly…", *wherein based on the display device, the file format of the display control information is analyzed and is reproduced to the proper display control file format required to accurately display the three-dimensional data*);

data conversion means for converting reproduced three-dimensional image data (col. 3 lines 24-26: "*…a single media file format that is converted to various display formats on the user side…*" and in col. 8 lines 45-63: "*Another embodiment allows for automatic detection of 3D display hardware...an appropriate display method can be automatically selected...Another embodiment automatically (or manually if desired) adjusts with overall left and right image shift...the 3D stereoscopic image is adjusted accordingly…*", *wherein 3D media on the display is reproduced based on the file format of the display control information*);

said data conversion means for converting reproduced three-dimensional image data based on a result of analysis by said three-dimensional image display control information analysis means (col. 3 lines 24-26: "*…a single media file format that is converted to various display formats on the user side…*" and in col. 8 lines 45-63: "*Another embodiment allows for automatic detection of 3D display hardware...an appropriate display method can be automatically selected...Another embodiment automatically (or manually if desired) adjusts with overall left and right image shift...the 3D stereoscopic image is adjusted accordingly…*", *wherein based on the display device, the file format of the display control information is analyzed and is converted to the proper display control file format required to accurately display the three-dimensional data, thereby correctly reproducing the 3D media on the display*);

However, Swift fails to teach said three-dimensional image display control information including first information indicating border image data to be displayed around an image of said three-dimensional image data and in accordance with said first information in received said three-dimensional image display control information, said three-dimensional image display control information analysis means selecting border image data included in said first information when said first information includes said border image data and selects one of at least one border image prepared in advance when said first information does not include said border image data, and outputting selected one to said data conversion means. Harman teaches said three-dimensional image display control information including first information indicating border image data to be displayed around an image of said three-dimensional image data (col. 6 lines 45-51: "*The processes would then work in either real-time or non real-time in order to create the 3D images. This can be further optimised through the use of borders...The 3D images may then be stored or transmitted to a 3D display, including shutterglasses, polarising glasses or an autostereoscopic display.*" and col. 14 lines 4-20: "*The present invention therefore preferably also defines a common border or reference point within a viewed image...This has the advantage of enhancing the stereoscopic effect in many scenes. This reference point can be a simple video border or...i) A simple coloured video border around the perimeter of the image. ii) A complex coloured video border consisting of two or more concentric borders...*") in accordance with said first information in received said three-dimensional image display control information, said three-dimensional image display control information analysis means selecting border image data included in said first information when said first information includes said border image data and selects one of at least one border image prepared in advance when said first information does not

include said border image data, and outputting selected one to said data conversion means (col. 6 lines 45-51: "*The processes would then work in either real-time or non real-time in order to create the 3D images. This can be further optimised through the use of borders...The 3D images may then be stored or transmitted to a 3D display, including shutterglasses, polarising glasses or an autostereoscopic display.*", col. 14 lines 4-20: "*The present invention therefore preferably also defines a common border or reference point within a viewed image...This has the advantage of enhancing the stereoscopic effect in many scenes. This reference point can be a simple video border or...i) A simple coloured video border around the perimeter of the image. ii) A complex coloured video border consisting of two or more concentric borders…*" and col. 14 lines 38-40: "*A image border...may be defined externally and genlocked onto the stereoscopic image output for display.*", *in which a border image is provided for three-dimensional images, as determined by the three-dimensional format analysis of Swift, wherein the border image has already been prepared externally prior to insertion of the border, in which a border is then provided onto a stereoscopic image*), therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the stored three-dimensional data of Swift with the optimized three-dimensional border display parameters of Harman because this combination would provide an accurate display of stereoscopic image data that has been analyzed to determine the three-dimensional data to be displayed, in which stereoscopic enhancement would be enabled through modifications to the image data using borders around the stereo images based on the determined display information to ensure preservation of the stereoscopic effect.

Regarding claim 53, Swift teaches an image data generation method (col. 3 lines 23-28: "*The embodiments of the invention include display methods, encoding methods and tools. With*

regard to display methods this includes a single media file format that is converted to various display formats on the user side; stereoscopic media in a window such as a browser or application…"), comprising:

receiving a parameter for displaying three-dimensional image data (col. 3 lines 24-26 - 47-50: "*…a…file format…of the original left and right is known, as designated by the tag within the…file…*" and col. 7 lines 51-57: "*The…system takes a Stereoscopic Media File…saves a local copy in…the display method selected…*", *where the system accepts a file and therefore contains a reception means to retrieve a parameter, such as a file format*) relating to a plurality of viewpoints for enabling stereoscopic vision (col. 9 lines 53-62: "*…a series of 3D stereoscopic images of an object into one file…store a series of N images into a…file…the point of view of the camera is swung around the object to generate…the… images.*", *where a file stores an object imaged from a plurality of stereoscopic vision camera view points*);

generating, based on the received parameter (col. 2 lines 28-41: "*The preferred embodiment…provides a single format with independent right and left channels…to represent the stereoscopic media…it provides a means of displaying stereoscopic media…it provides automatic and manual optimization adjustments such as parallax shift adjustment…to the stereoscopic media based on viewing hardware…for optimal viewing quality.*", *where a parameter, such as the file format, is provided that controls the format of image data to enable the image to be displayed in a parallax three-dimensional image format on a display*), three-dimensional image display control information necessary for conversion for enabling stereoscopic vision of said three-dimensional image data in a desired format adapted to a display unit when externally received image data includes said three-dimensional image data (col. 3 lines

24-26: "*…a single media file format that is converted to various display formats on the user side…*" and in col. 8 lines 45-63: "*Another embodiment allows for automatic detection of 3D display hardware…an appropriate display method can be automatically selected…Another embodiment automatically (or manually if desired) adjusts with overall left and right image shift…the 3D stereoscopic image is adjusted accordingly…*", *wherein based on the display device, the file format of the display control information is analyzed and is converted to the proper display control file format required to accurately display the three-dimensional data, thereby correctly reproducing the 3D media on the display*); and

generating a multimedia information file capable of including both of externally received said three-dimensional image data and said three-dimensional image display control information, or externally received at least two-dimensional image data (col. 3 lines 24-26 and 47-50: "*…a single media file format that is converted to various display formats…the format of the original left and right is…designated by the tag within the…file…*", *Fig. 1*, and col. 8 lines 11-20: "*…a file structure is created to store and preserve various types of stereo media…This one file format can store multiple or single stereo/non-stereo media elements. FIG. 10 illustrates a VRR file 1000 that may contain…a…Stereoscopic Object Model…*", *where the stereoscopic media file contains information related to the three-dimensional image data, such as stereoscopic three-dimensional models*);

However, Swift fails to teach said three-dimensional image display control information including first information indicating border image data to be displayed around an image of said three-dimensional image data. Harman teaches said three-dimensional image display control information including first information indicating border image data to be displayed around an

image of said three-dimensional image data (col. 6 lines 45-51: "*The processes would then work in either real-time or non real-time in order to create the 3D images. This can be further optimised through the use of borders...The 3D images may then be stored or transmitted to a 3D display, including shutterglasses, polarising glasses or an autostereoscopic display.*" and col. 14 lines 4-20: "*The present invention therefore preferably also defines a common border or reference point within a viewed image...This has the advantage of enhancing the stereoscopic effect in many scenes. This reference point can be a simple video border or...i) A simple coloured video border around the perimeter of the image. ii) A complex coloured video border consisting of two or more concentric borders…*"). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the stored three-dimensional data of Swift with the optimized three-dimensional border display parameters of Harman because this combination would provide an accurate display of stereoscopic image data that has been analyzed to determine the three-dimensional data to be displayed, in which stereoscopic enhancement would be enabled through modifications to the image data using borders around the stereo images based on the determined display information to ensure preservation of the stereoscopic effect.

Regarding claim 56, Swift teaches an image data generation method (col. 3 lines 23-28: "*The embodiments of the invention include display methods, encoding methods and tools. With regard to display methods this includes a single media file format that is converted to various display formats on the user side; stereoscopic media in a window such as a browser or application…*") for reproducing a multimedia information file generated by an image data generation apparatus (col. 3 lines 24-26: "*…a single media file format that is converted to*

various display formats on the user side…" and in col. 8 lines 45-63: "*Another embodiment allows for automatic detection of 3D display hardware…an appropriate display method can be automatically selected…Another embodiment automatically (or manually if desired) adjusts with overall left and right image shift…the 3D stereoscopic image is adjusted accordingly…*", *wherein based on the display device, the file format of the display control information is analyzed and is converted to the proper display control file format required to accurately display the three-dimensional data, thereby correctly reproducing the 3D media on the display*), said image data generation apparatus generating the multimedia information file capable of including both of externally received three-dimensional image data and three-dimensional image display control information, or externally received at least two-dimensional image data (col. 3 lines 24-26 and 47-50: "*…a single media file format that is converted to various display formats…the format of the original left and right is…designated by the tag within the…file…*", *Fig. 1*, and col. 8 lines 11-20: "*…a file structure is created to store and preserve various types of stereo media…This one file format can store multiple or single stereo/non-stereo media elements. FIG. 10 illustrates a VRR file 1000 that may contain…a…Stereoscopic Object Model…*", *where the stereoscopic media file contains information related to the three-dimensional image data, such as stereoscopic three-dimensional models*), comprising:

receiving the multimedia information file (col. 3 lines 24-26 - 47-50: "*…a…file format…of the original left and right is known, as designated by the tag within the…file…*" and col. 7 lines 51-57: "*The…system takes a Stereoscopic Media File…saves a local copy in…the display method selected…*");

analyzing a structure of said multimedia information file so as to extract the three-dimensional image display control information and the three-dimensional image data or said two-dimensional image data (col. 3 lines 23-50: "*…the invention…includes a…media file format…to…display formats on the user side…support of auto-detection 3D stereo hardware systems…automatic…calibration /adjustments for physical 3D viewing mechanisms…and stereoscopic viewing that…as designated by the tag within the Stereoscopic 3D Media file…*", *where the file format is analyzed to determine the associated display format*);

analyzing said three-dimensional image display control information (col. 3 lines 24-50: "*…it provides a single format with independent right and left channels…to represent the stereoscopic media…it provides automatic and manual optimization adjustments such as parallax shift adjustment, brightness control, color adjustment, and cross-talk reduction to the stereoscopic media…*", *in which the file format is analyzed to determine the display control data*);

reproducing said three-dimensional image data extracted by the file structure analysis (col. 8 lines 45-63: "*Another embodiment allows for automatic detection of 3D display hardware…an appropriate display method can be automatically selected…Another embodiment automatically (or manually if desired) adjusts with overall left and right image shift…the 3D stereoscopic image is adjusted accordingly…*", *wherein based on the display device, the file format of the display control information is analyzed and is reproduced to the proper display control file format required to accurately display the three-dimensional data*);

converting reproduced three-dimensional image data (col. 3 lines 24-26: "*…a single media file format that is converted to various display formats on the user side…*" and in col. 8

lines 45-63: "*Another embodiment allows for automatic detection of 3D display hardware...an appropriate display method can be automatically selected...Another embodiment automatically (or manually if desired) adjusts with overall left and right image shift...the 3D stereoscopic image is adjusted accordingly…*", *wherein 3D media on the display is reproduced based on the file format of the display control information*);

converting reproduced three-dimensional image data based on a result of analysis by said three-dimensional image display control information analysis means (col. 3 lines 24-26: "…*a single media file format that is converted to various display formats on the user side…*" and in col. 8 lines 45-63: "*Another embodiment allows for automatic detection of 3D display hardware...an appropriate display method can be automatically selected...Another embodiment automatically (or manually if desired) adjusts with overall left and right image shift...the 3D stereoscopic image is adjusted accordingly…*", *wherein based on the display device, the file format of the display control information is analyzed and is converted to the proper display control file format required to accurately display the three-dimensional data, thereby correctly reproducing the 3D media on the display*);

in said step of converting said three-dimensional image data, said reproduced three-dimensional image data is converted based on a result of analysis by said three-dimensional image display control information analysis means (col. 3 lines 24-26: "…*a single media file format that is converted to various display formats on the user side…*" and in col. 8 lines 45-63: "*Another embodiment allows for automatic detection of 3D display hardware...an appropriate display method can be automatically selected...Another embodiment automatically (or manually if desired) adjusts with overall left and right image shift...the 3D stereoscopic image is adjusted*

accordingly…", *wherein based on the display device, the file format of the display control information is analyzed and is converted to the proper display control file format required to accurately display the three-dimensional data, thereby correctly reproducing the 3D media on the display*);

However, Swift fails to teach said three-dimensional image display control information including first information indicating border image data to be displayed around an image of said three-dimensional image data and in said step of analyzing said first information, in accordance with said first information in received said three-dimensional image display control information, border image data included in said first information is selected when said first information includes said border image data and selects one of at least one border image prepared in advance when said first information does not include said border image data. Harman teaches said three-dimensional image display control information including first information indicating border image data to be displayed around an image of said three-dimensional image data (col. 6 lines 45-51: "*The processes would then work in either real-time or non real-time in order to create the 3D images. This can be further optimised through the use of borders...The 3D images may then be stored or transmitted to a 3D display, including shutterglasses, polarising glasses or an autostereoscopic display.*" and col. 14 lines 4-20: "*The present invention therefore preferably also defines a common border or reference point within a viewed image...This has the advantage of enhancing the stereoscopic effect in many scenes. This reference point can be a simple video border or...i) A simple coloured video border around the perimeter of the image. ii) A complex coloured video border consisting of two or more concentric borders…*") in accordance with said first information in received said three-dimensional image display control information, said

three-dimensional image display control information analysis means selecting border image data included in said first information when said first information includes said border image data and selects one of at least one border image prepared in advance when said first information does not include said border image data, and outputting selected one to said data conversion means (col. 6 lines 45-51: "*The processes would then work in either real-time or non real-time in order to create the 3D images. This can be further optimised through the use of borders...The 3D images may then be stored or transmitted to a 3D display, including shutterglasses, polarising glasses or an autostereoscopic display.*", col. 14 lines 4-20: "*The present invention therefore preferably also defines a common border or reference point within a viewed image...This has the advantage of enhancing the stereoscopic effect in many scenes. This reference point can be a simple video border or...i) A simple coloured video border around the perimeter of the image. ii) A complex coloured video border consisting of two or more concentric borders...*" and col. 14 lines 38-40: "*A image border...may be defined externally and genlocked onto the stereoscopic image output for display.*", *in which a border image is provided for three-dimensional images, as determined by the three-dimensional format analysis of Swift, wherein the border image has already been prepared externally prior to insertion of the border, in which a border is then provided onto a stereoscopic image*), therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the stored three-dimensional data of Swift with the optimized three-dimensional border display parameters of Harman because this combination would provide an accurate display of stereoscopic image data that has been analyzed to determine the three-dimensional data to be displayed, in which stereoscopic enhancement would be enabled through

modifications to the image data using borders around the stereo images based on the determined display information to ensure preservation of the stereoscopic effect.

Allowable Subject Matter

Claim 51 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art fails to teach said three-dimensional image display control information further includes second information indicating whether a border is to be displayed around the image of said three-dimensional image data, using said border image data, and said three-dimensional image display control information analysis means analyzes information on presence/absence of border display in accordance with said second information, and when the border is to be displayed, further in accordance with said first information in received said three-dimensional image display control information, said three-dimensional image display control information analysis means selects border image data included in said first information when said first information includes said frame image data, and selects one of at least one said border image prepared in advance when said first information does not include said border image data, and outputs selected one to said data conversion means, therefore claim 51 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 57 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art fails to teach said three-dimensional image display control

information further includes second information indicating whether a border is to be displayed around an image of said three-dimensional image data, using said border image data, and in said step of analyzing said three-dimensional image display control information, information on presence/absence of border display is analyzed in accordance with said second information, and when the border is to be displayed, further in accordance with said first information in received said three-dimensional image display control information, border image data included in said first information is selected when said first information includes said frame image data, and one of at least one said border image prepared in advance is selected when said first information does not include said border image data, therefore claim 57 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-4, 6, 7, 10-21, 23-26, and 33-46 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAID BROOME whose telephone number is (571)272-2931. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on (571)272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Said Broome/
Examiner, Art Unit 2628

/Ulka Chauhan/
Supervisory Patent Examiner, Art Unit 2628